

Package ‘nis’

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Title Nationwide Inpatient Sample tools for R

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Depends R (>= 2.12.0)

Description The nis package provides tools for working with data from the Nationwide Inpatient Sample. Included is a convenience function to generate SQL code for importing the NIS flat files into a MySQL database.

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URL <http://code.google.com/p/nis>

BugReports <http://code.google.com/p/nis/issues/list>

LazyLoad yes

LazyData yes

Collate ‘generateSQL.R’

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nis-package	<i>Tools for working with data from the Nationwide Inpatient Sample</i>
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Description

Tools for working with data from the Nationwide Inpatient Sample

generateSQL

*Generate SQL code to convert NIS ascii flat files to SQL database***Usage**

```
generateSQL(years, files, type, remove.capitalization =
T, db.table = NULL, layouts.uri = NULL, old = NULL, new =
NULL, normalize.dx = F, normalize.pr = F, names = NULL,
data_type = "char")
```

Arguments

years	A vector containing the years of data to include. The order of years must be the same as file locations provided in the files parameter. Currently, only years 1998 through 2009 are supported.
files	A vector containing the file locations of the ascii flat files. The order of files must be the same as the years provided by the years parameter.
type	The type of NIS data being loaded. Acceptable values are "core", "hospitals", "severity", and "groups", for the NIS Core, Hospitals, Severity, and Dx Pr Groups data files, respectively.
remove.capitalization	optional A logical indicating whether the variable names should be converted to all lower case. Default is TRUE.
db.table	optional A character indicating the desired database table name. If not specified, will default to the type parameter (i.e. core, hospitals, severity, or groups)
layouts.uri	optional A list specifying the uris to use to fetch the layouts of the ascii flat files. This should usually not be specified, in which case the default uris are used, as listed in details below.
old	optional A vector of variable names to be replaced by new. Must be in the same order as the new parameter.
new	optional A vector of new variable names to replace those specified in old. Must be in the same order as the old parameter.
normalize.dx	Logical indicting whether to provide additional SQL statements to normalize the diagnosis (dx1, dx2, etc.) variables into a sperate table. Default is FALSE.
normalize.pr	Logical indicting whether to provide additional SQL statements to normalize the procedure (pr1, pr2, etc.) variables into a sperate table. Default is FALSE.
names	Character vector giving names for the three columns of the normalized diagnosis and procedure tables. Only applicable if normalize.dx or normalize.pr are TRUE. Default is NULL, in which case the columns are named "keyid", "icd9", and "variable", for the record number, ICD9 code, and variable name (i.e. dx1 or dx2), respectively.
data_type	A character specifying the MySQL data_type. The default is "char", but "varchar" is an appropriate alternative. Theoretically, there are performance trade-offs between "char" and "varchar", but the practical benefits for the NIS database have not been tested.

Value

A list of two character vectors:

createTable	A SQL statement to create an empty table with with variables appropriate for NIS data.
loadData	One or more SQL statements to load data from the specified files into a MySQL table using the load data infile SQL statement.

The generateSQL function is a convenience function that returns SQL code to be used for creating appropriate tables for a MySQL database and loading data from the flat ascii files provided by HCUP.

Details Unless layouts.uri is specified, generateSQL uses the parses layout information from the NIS website to determine the appropriate variable names and fixed-width locations of data in the NIS ascii flat files. By default, the layouts.uri object is the following list: layouts.uri <- list("1998" = 'http://www.hcup-us.ahrq.gov/db/nation/nis/tools/stats/NIS_1998_COREv2.TXT', "1999" = 'http://www.hcup-us.ahrq.gov/db/nation/nis/tools/stats/NIS_1999_COREv2.TXT', "2000" = 'http://www.hcup-us.ahrq.gov/db/nation/nis/tools/stats/NIS_2000_CORE.TXT', "2001" = 'http://www.hcup-us.ahrq.gov/db/nation/nis/tools/stats/NIS_2001_CORE.TXT', "2002" = 'http://www.hcup-us.ahrq.gov/db/nation/nis/tools/stats/FileSpecifications_NIS_2002_CORE', "2003" = 'http://www.hcup-us.ahrq.gov/db/nation/nis/tools/stats/FileSpecifications_NIS_2003_CORE', "2004" = 'http://www.hcup-us.ahrq.gov/db/nation/nis/tools/stats/FileSpecifications_NIS_2004_CORE', "2005" = 'http://www.hcup-us.ahrq.gov/db/nation/nis/tools/stats/FileSpecifications_NIS_2005_Core', "2006" = 'http://www.hcup-us.ahrq.gov/db/nation/nis/tools/stats/FileSpecifications_NIS_2006_Core', "2007" = 'http://www.hcup-us.ahrq.gov/db/nation/nis/tools/stats/FileSpecifications_NIS_2007_Core', "2008" = 'http://www.hcup-us.ahrq.gov/db/nation/nis/tools/stats/FileSpecifications_NIS_2008_Core', "2009" = 'http://www.hcup-us.ahrq.gov/db/nation/nis/tools/stats/FileSpecifications_NIS_2009_Core')

```
## Create SQL statement to upload NIS Core data from 1998-2009 to MySQL database # Years to include years <- c(seq(1998, 2009))
```

```
# Location of the NIS ascii flat files files <- c('/data/nis/NIS_1998_Core.ASC', '/data/nis/NIS_1999_Core.ASC', '/data/nis/NIS_2000_Core.ASC', '/data/nis/NIS_2001_Core.ASC', '/data/nis/NIS_2002_Core.ASC', '/data/nis/NIS_2003_Core.ASC', '/data/nis/NIS_2004_Core.ASC', '/data/nis/NIS_2005_Core.ASC', '/data/nis/NIS_2006_Core.ASC', '/data/nis/NIS_2007_Core.ASC', '/data/nis/NIS_2008_Core.ASC', '/data/nis/NIS_2009_Core.ASC' )
```

```
# Generate SQL statements sql.core <- generateSQL(years = years, files = files, type = "core")
```

```
# Output SQL statements to a file #cat(sql.core$createTable, file = "makeTableCore.sql") #cat(sql.core$uploadData, file = "uploadDataCore.sql")
```

```
http://www.hcup-us.ahrq.gov/nisoverview.jsp
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